BRUHAT BANGALORE MAHANAGARA PALIKE

KODIGEHALLI SUBDIVISION

WARD NO.07, Byatarayanapura

Measurement Sheet

Name of work: Improvements to roads of BGS Layout in ward no 07, Byatarayanapura,

Est Cost : 30.00 LAKHS

BRUHAT BANGALORE MAHANAGARA PALIKE

Agency:M/S KRIDL

Name of Work: Improvements to Roads of BGS Layout in Ward No. 07, Byatarayanapura

Sl No	Description of item	Unit	No	L	B	D	Qty
1	Earthwork excavation by manual means in rodinary soil involving an average horizontal throw upto 2 m and an average lift upto 1.5m, excavated surafce levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking clods complete as per specifications..						
	Location	cum					
	Jakkur layout 0-40		1	40	0.95	0.9	34.20
	0-30		2	30	0.95	0.9	51.30
	30-60		2	30	0.95	0.9	51.30
	60-70		2	10	0.95	0.9	17.10
						Total	**153.90**
2	Providing and laying in position plain cement concrete of nominal mix 1:4:8 using 40mm and down size graded granite metal machine mixed, conrete laid in layers not exceeding 15 cms. Thick well compacted in foundation and plinth, including cost of all materials labour, HOM of machinery, curing complete as per specification .						
	Bottom concrete	cum					
	Jakkur layout 0-40		1	40	0.95	0.10	4
	0-30		2	30	0.95	0.10	6
	30-60		2	30	0.95	0.10	6
	60-70		2	10	0.95	0.10	2
							17.10
5	Providing TMT Steel Reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.						
		tonne	L	no of rods	le of u bar	Total length	
						10mm	8mm
	Main rod	1	40	450	1.85	832.5	
	Distribution	1	40	7	40		560
	Main rod	2	30	350	1.85	1295	
	Distribution	2	30	7	30		420
	Main rod	2	30	350	1.85	1295	
	Distribution	2	30	7	30		420
	Main rod	2	10	115	1.85	425.5	
	Distribution	2	10	7	10		140
						3848	1540
						0.62 kg/cum	0.39kg/cum
						2385.76	600.6
						2986.36	**2.9**
3	Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, post and struts, square / rectangular/ polygon in plan including cost of all materials, labour complete as per specifications.						

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Bruhat Bangalore Mahanagara Palike
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Side wall	sqm					
		4	40		0.60	96
		8	30		0.60	144
		8	30		0.60	144
		8	10		0.60	48
						432.00

7 Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications

road work	cum					
main road		1	10	2.0	0.2	4
		1	5	3.0	0.2	3
		1	12	2.5	0.2	6
		1	15	3.0	0.2	9
1st main road		1	20	4.0	0.2	16
		5	15	5.0	0.2	75
		7	4	5.0	0.2	28
		3	10	2.5	0.2	15
2nd main road		10	4.5	2.0	0.2	18
		5	6	2.5	0.2	15
		8	3	1.5	0.2	7
						196.00

8 Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications.

road work	cum					
main road		1	10	2	0.2	3
		1	5	3	0.2	3
		1	12	2.5	0.2	6
		1	15	3	0.2	9
1st main road		1	20	4	0.2	16
		5	15	5	0.2	75
		7	4	5	0.2	28
		3	10	2.5	0.2	15
2nd main road		10	4.5	2	0.2	18
		5	6	2.5	0.2	15
		8	3	1.5	0.2	7
						195.20
				Qty Ltd to		65.2

9 Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications.

main road		1	10	2		20
		1	5	3		15
		1	12	2.5		30
		1	15	3		45
1st main road		1	20	4		80
		5	15	5		375
		7	4	5		140
		3	10	2.5		75
2nd main road		10	4.5	2		90
		5	6	2.5		75
		8	3	1.5		36
						981
				Qty Ltd to		**326**

10	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications.						
	main road	**sqm**					
	0-30	1	30	6.1	6.6	6.35	191
	30-60	1	30	6.6	5.9	6.25	188
	60-90	1	30	5.9	6.1	6	180
	90-120	1	30	6.1	6	6.05	182
	120-150	1	30	6	6.3	6.15	185
	150-180	1	30	6.3	6.3	6.3	189
	180-210	1	30	6.3	6.3	6.3	189
	210-240	1	30	6.3	6.4	6.35	191
	240-270	1	30	6.4	6	6.2	186
	270-282	1	12	6	6	6	72
							1750.50
	1st main road						
	0-30	1	30	7	6.4	6.7	201
	30-60	1	30	6.4	6.3	6.35	191
	60-90	1	30	6.3	6.3	6.3	189
	90-120	1	30	6.3	6.9	6.6	198
	120-150	1	30	6.9	6	6.45	194
	150-182	1	32	6	6.5	6.25	200
							1172.00
	cross road						
	0-30	1	30	6.1	6.2	6.15	185
	30-48	1	18	6.2	6.2	6.2	112
							296.10
	2nd main road						
	0-30	1	30	6.4	5.9	6.15	185
	30-60	1	30	5.9	5.9	5.9	177
	60-90	1	30	5.9	5.5	5.7	171
	90-120	1	30	5.5	6.4	5.95	179
	120-150	1	30	6.4	6.8	6.6	198
	150-188	1	38	6.8	6.8	6.8	258
							1167.40
	Patch work	1	30			3	90
		1	40			3	120
		1	5			4	20
							230.00
							4616.00
4	Providing and laying in position reinforced cement concrete of Design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to is 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications						
	RCC Drain	**cum**					
	Bottom 0-40		1	40	0.75	0.15	4.50
	Side wall		2	40	0.15	0.6	7.20
	0-30		2	30	0.75	0.15	6.75

			4	30	0.15	0.6	10.80
	30-60		2	30	0.75	0.15	6.75
			4	30	0.75	0.15	13.50
	60-70		2	10	0.75	0.15	2.25
			4	10	0.15	0.6	3.60
							55.35
						Qty Ltd to	**52.65**
6	Providing and fixing RCC Precast cover slab of 100mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge.						
	0-40		1	67	0.6	0.75	30.15
	0-30		2	100	0.6	0.75	45.00
	30-60		2	100	0.6	0.75	45.00
	60-70		2	33	0.6	0.75	14.85
							135.00
11	Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications						
	main road						
	0-30	1	30	6.10	6.60	6.35	190.50
	30-60	1	30	6.60	5.90	6.25	187.50
	60-90	1	30	5.90	6.10	6.00	180.00
	90-120	1	30	6.10	6.00	6.05	181.50
	120-150	1	30	6.00	6.30	6.15	184.50
	150-180	1	30	6.30	6.30	6.30	189.00
	180-210	1	30	6.30	6.30	6.30	189.00
	210-240	1	30	6.30	6.40	6.35	190.50
	240-270	1	30	6.40	6.00	6.20	186.00
	270-282	1	12	6.00	6.00	6.00	72.00
							1750.50
	1st main road						
	0-30	1	30	7.00	6.40	6.70	201.00
	30-60	1	30	6.40	6.30	6.35	190.50
	60-90	1	30	6.30	6.30	6.30	189.00
	90-120	1	30	6.30	6.90	6.60	198.00
	120-150	1	30	6.90	6.00	6.45	193.50
	150-182	1	32	6.00	6.50	6.25	200.00
							1172.00
	cross road						
	0-30	1	30	6.10	6.20	6.15	184.50
	30-48	1	18	6.20	6.20	6.20	111.60
							296.10
	2nd main road						
	0-30	1	30	6.40	5.90	6.15	184.50
	30-60	1	30	5.90	5.90	5.90	177.00
	60-90	1	30	5.90	5.50	5.70	171.00
	90-120	1	30	5.50	6.40	5.95	178.50
	120-150	1	30	6.40	6.80	6.60	198.00
	150-188	1	38	6.80	6.80	6.80	258.40
							1167.40
	Patch work	1	30			3	90.00

		1	40			3	120.00
		1	5			4	20.00
							230.00
							4616.00
					Qty Ltd to		**4610**
12	Providing and laying bituminous concrete 40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 6% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509. (Th=0.04m)						
	main road						
	0-30		1	30	6.35	0.04	7.62
	30-60		1	30	6.25	0.04	7.5
	60-90		1	30	6.00	0.04	7.2
	90-120		1	30	6.05	0.04	7.26
	120-150		1	30	6.15	0.04	7.38
	150-180		1	30	6.30	0.04	7.56
	180-210		1	30	6.30	0.04	7.56
	210-240		1	30	6.35	0.04	7.62
	240-270		1	30	6.20	0.04	7.44
	270-282		1	12	6.00	0.04	2.88
							70.02
	1st main road						
	0-30		1	30	6.70	0.04	8.04
	30-60		1	30	6.35	0.04	7.62
	60-90		1	30	6.30	0.04	7.56
	90-120		1	30	6.60	0.04	7.92
	120-150		1	30	6.45	0.04	7.74
	150-182		1	32	6.25	0.04	7.5
							46.38
	cross road						
	0-30		1	30	6.15	0.04	7.38
	30-48		1	18	6.20	0.04	4.46
							11.84
	2nd main road						
	0-30		1	30	6.15	0.04	7.38
	30-60		1	30	5.90	0.04	7.08
	60-90		1	30	5.70	0.04	6.84
	90-120		1	30	5.95	0.04	7.14
	120-150		1	30	6.60	0.04	7.92
	150-188		1	38	6.80	0.04	10.34
							46.60
	Patch work		1	30	3.00	0.04	3.6
			1	40	3.00	0.04	4.8
			1	5	4.00	0.04	0.8
							9.25
							184.09
13	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications						
	Main road		2	282	0.10		56.4

			47	3	0.10		14.1
	1st main road		2	180	0.10		36
			30	3	0.10		9
	cross road		8	3	0.10		2.4
	2nd main road		2	188	0.10		37.6
							155.5
					Qty Ltd to		145

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